GRADE: 4th - Adult
TIME: 1 hour
SEASON: All

ANIMAL ADAPTATIONS

National Science Teaching Standards:

A. Science as **INQUIRY**
C. LIFE Science
F. Science in **PERSONAL** and **SOCIAL PERSPECTIVE**

Objective:

- Students will learn about the habitats of Iowa's furbearers by using pelts to compare adaptations of these animals.
- Students will have an opportunity to consider what an adaptation is and why animals have their particular adaptations.

Pre Activity:

- Students need an understanding of the following vocabulary: habitat, climate, food chain, producer and consumer (herbivore, carnivore, omnivore), predator, prey.
- Using research tools available (internet, encyclopedia, etc.) have students select an animal to research relating the vocabulary words (above) to their animals. Extension: Students make a book for the library or for a younger class about the animal chosen using the vocabulary words in the book. Share
- "Picture This" activity, Iowa Supplements to Project Wild, pp. 108-109

Equipment

Fur Case
Skull Collection
Pictures of animals and information sheets or fact cards
Blank sheet of paper
Pencil

Procedure

1. Divide students into small groups.
2. Give each group a pencil, blank sheet of paper, and one fur from the fur case. Stress to the students the importance of caring for and proper handling of the furs. Several thousand people handle the furs each year.
3. Have students list adaptations they can observe from their pelt that tell:
    a. What type of habitat does the animal live in (land or semi-aquatic)?
    b. What level of the food chain does the animal belong to (producer, consumer, predator, prey)?

    Stress to the group that knowing the animal's name is not important!!
4. Have each group report their conclusions to the others.
5. Place the skulls from the group's corresponding furs at the front of the room.

6. Have one representative from each group try to select the skull that matches the group's pelt.
7. After each group has selected the correct skull, have groups decide which sense would be most important for the animals survival. (Groups should develop the idea that the combination of senses for each animal is most important.)
8. Ask what clues the pelt and skull provide that tells which senses are highly developed.
9. After groups have studied the animal's habitat, level in the food chain and senses; have students decide what types of food their animal may eat.
10. Have the groups identify the animal they have been working with by selecting the picture and fact cards/sheet about their animal. Read the information. Decide if you have chosen the correct animal if not select another picture and card until you are convinced all of the pieces match…fur, skull, picture, information. Share your findings, a couple of interesting facts about your animal, and how as scientists you drew your conclusion.

Furs included in the Fur Case

Raccoon	Timber Wolf
Red Fox	Woodchuck
Gray Fox	Coyote
Beaver	River Otter
Beaver	Badger
Spotted Skunk	Opossum
Bobcat	Muskrat
Weasel	Fox Squirrel
Mink	

Post Activity:

Have students continue their research about the Iowa furbearer they discovered at Springbrook. Make a class mural including Iowa woodlands, prairies, and wetland/ponds. Have each student draw his/her animal in the mural in appropriate habitat and with a food chain it is connected to. As a class make a chart of Iowa furbearers characteristics.

Post Discussion:

- Describe your animal's habitat.
- Describe your animal's life cycle.
- Describe your animal's food chain; how do some of the other furbearers affect your animal's existence and vice-versa?
- As a scientist, what clues did you and your colleagues (partners) use to decide which furbearer it was?
- What was the most decisive clue?
- Did you and your colleagues agree or disagree on the choice of animal? Is it okay to disagree with your partners? Explain.
- What factors influence your animal's environment in a beneficial and/or detrimental way?

- Were these factors nature or human caused? Explain
- What can be done to make sure the detrimental affects are stopped or at least slowed down?
- What can you do specifically to help your animal's and the other Iowa furbearers' environment?

Resources:

Burt, William Henry (1976). A Field Guide to the Mammals. Boston, MA: Houghton Mifflin Co.

Farrand, John Jr. (1993). Familiar Animal Tracks of North America. New York, NY: Alfred A. Knopf.

Iowa State University Extension Natural Resources Bulletins - www.extension.iastate.edu/pubs/